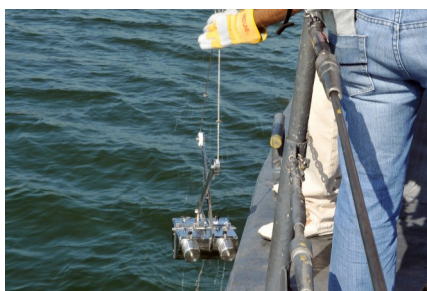


# Peaceful Nuclear Cooperation

U.S. Support for NPT Article IV

## UNITED STATES & MALAYSIA

Through the International Atomic Energy Agency (IAEA), the United States contributes to the work of many countries using nuclear materials and technology for peaceful purposes. In recent years, U.S. support has focused on achieving tangible and lasting benefits in fields that are vital to human development, including agriculture, human health, water resource management, and human resource development. Since 2000, the IAEA has approved and funded \$6,577,794, including \$231,402 in 2013, under its Technical Cooperation (TC) program for projects in Malaysia.



The United States views its support for the peaceful uses of nuclear energy as a critical part of its efforts to strengthen the IAEA and the global nuclear nonproliferation regime. About 25% of the IAEA's annual budget for peaceful nuclear assistance comes from the U.S. In 2012, the U.S. contributed almost \$22 million to the Technical Cooperation Fund and over \$6 million in additional funding for training, fellowships, and cost-free experts.

In addition to these longstanding contributions to the IAEA's peaceful uses programs, at the 2010 NPT Review Conference, the U.S. announced a \$100 million Initiative to further expand this support over the next five years. The U.S. pledged \$50 million towards the IAEA's Peaceful Uses Initiative (PUI), focusing on human health, food security, water resource management, and nuclear power infrastructure development. The U.S. has already allocated over \$27 million to specific PUI projects, and welcomes the contributions of Japan, the Republic of Korea, New Zealand, the Czech Republic, Hungary, Sweden, Australia, France, Indonesia, Brazil, Italy, the UK, and Kazakhstan to this important Initiative.

### NUCLEAR ENERGY

An increasing number of Member States are considering nuclear power as part of their electricity generation options, and those Member States need comprehensive and credible information on nuclear power issues such as cost and benefit, energy security and environmental impact to support their decision making. Malaysia

recently participated in a regional TC project supported by the United States that provided comprehensive information to Member States to support their decision making regarding nuclear power planning and development. Malaysia is now currently working through national TC projects supported by the United States to strengthen its national capacity for planning and building a nuclear power infrastructure as well as to enhance modeling and analytical capabilities for energy-environment economics.

### NUCLEAR SAFETY

Disused facilities and sites contaminated because of activities involving the use of radioactive material exist worldwide and many pose continuing health risks to adjacent communities and, potentially, to the wider public. Malaysia is currently participating in an interregional TC project supported by the United States that will provide support and assistance toward the efficient clean-up of radioactive contaminated facilities and sites. Through this project, barriers to the acceptance of continued or expanded applications of peaceful uses of nuclear technology can, to some extent, be removed.

Malaysia also recently participated in a regional TC project supported by the United States to strengthen the remaining elements of its national regulatory framework for radiation safety to meet international safety standards as well as to establish a regional network of regulatory authorities to exchange information and share experiences.

### HUMAN HEALTH

Malaysia is also participating in a project, coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, to strengthen biological

1. *Power plant under construction. Credit: Kansai Electric Power Co.*
2. *Standard maintenance check. Credit: Arthus-Bertrand*
3. *Sediment sampling for the study and control of pollutants. Credit: Dean Calma/IAEA*

dosimetry in the Asia and the Pacific region. The project aims to increase the preparedness of participating Member States to react to national and regional radiation and nuclear accidents by establishing suitable standards to monitor individuals exposed to radiation; updating existing technologies and introducing new technologies; and initiating national, regional and interregional networks on biological dosimetry which can be engaged in scenarios of mass casualties.

## AGRICULTURE

Malaysia is also participating in a project, coordinated by the IAEA's Department of Nuclear Sciences and Applications and supported by the United States, to implement capacity building activities to improve food safety and quality through nuclear technology and networking. The project involves workshops, human resource training, and technology transfers, and aims to establish functional networks, raise awareness of food safety and conduct food safety gap analysis in selected countries.

## ENVIRONMENT

Malaysia is currently participating in a regional TC project supported by the United States to evaluate the extent and possible impact of the releases of radioactivity from the Fukushima Daiichi nuclear power plant into the marine environment and make scientific assessments of the data.

## HUMAN RESOURCES

To contribute to Member States' manpower development, the IAEA awards individual fellowships and organizes group training courses. Every year, numerous fellows and training course participants travel to the United States for training in various peaceful uses of nuclear technology and return to their home country to apply the lessons learned.

Since 2000, the United States has hosted multiple training courses that included Malaysian participants in the fields of nuclear safety and security, decommissioning and environmental remediation, food irradiation, radiotherapy, and developing national long-range nuclear energy strategies. Training was also provided through the IAEA Fellowship Program to 23 Malaysians, six of which were sponsored by the United States, in fields such as sustainable energy development, research reactors, food irradiation, assessment of micronutrients in nutrition, and contaminants and residues in food and the environment.

Additionally, since 2000, 26 U.S. experts have traveled to Malaysia to collaborate through various IAEA Technical Cooperation projects. Examples of some topics include tomography, radiosurgery, isotopes, safety, waste management, and nuclear fuel cycle.

implementing Additional Protocol (AP), and assisting with human resource development for nuclear infrastructure.

The U.S. International Nuclear Safeguards Engagement Program (INSEP) engages Member States with sound plans to establish safety, security, and nonproliferation infrastructures that are necessary for a responsible civil nuclear energy power program. In March 2010, DOE/NNSA signed a Letter of Intent (LOI) for cooperation in peaceful nuclear energy infrastructure



1. *Sampling in a geothermal well. Credit: Jane Gerardo-Abaya/IAEA*
2. *International radiation measurement exercise. Credit: Dean Calma/IAEA*
3. *2002 IAEA-Argonne training course on nuclear safety. Credit: Argonne National Laboratory*

**T**hrough bilateral efforts, the United States has provided direct support to Member States through various collaborative projects such as the exchange of information, expert visits, and training of personnel.

In 2009, the U.S. Department of Energy's National Nuclear Security Administration Association (DOE/NNSA) provided \$102,000 to Malaysia to assist the IAEA in organizing a workshop. The workshop focused on

projects, and under the LOI, INSEP has collaborated with Malaysia in preparing for entry-into-force of the AP. INSEP is also cooperating with Malaysia in Non-Destructive Assay training.

In 2012, DOE/NNSA contributed \$167,000 in funding to Malaysia.

Additionally, since 2000, two Malaysian physicians have been certified in the U.S. through the American Board of Nuclear Medicine.

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